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Serial No. 10/625,176
Response to Official Action

In the Drawings

Please find attached hereto eight (8) replacements sheets of drawings corresponding to Figures 1 – 15.

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Remarks

Applicant has cancelled Claims 1 – 45 and added new Claims 46 – 55. Applicant respectfully submits that no new matter was added by the amendment, as all of the amended matter was either previously illustrated or described in the drawings, written specification and/or claims of the present application. Entry of the amendment and favorable consideration thereof is earnestly requested.

The Examiner has required amendments to the specification in compliance with 37 CFR 1.52(a) and (b). The Examiner has objected to the drawings under 37 CFR 1.83(a). The Examiner has rejected claims 1 – 8 and 29 - 45 under 35 U.S.C. §112, second paragraph, as being indefinite. The Examiner has further rejected Claims 1 – 4, 35, 40, 42 – 43 and 45 under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 6,104,155 to Rosa ("the '155 patent"). The Examiner has still further rejected claims 5 – 6, 8, 36 and 38 under 35 U.S.C. §103(a) as being unpatentable over the '155 patent in view of U.S. Patent No. 5,828,194 to Canova ("the '194 patent"). The Examiner has also rejected claims 37, 39, 41 and 44 under 35 U.S.C. §103(a) as being unpatentable over the '155 patent in view of the '194 patent and further in view of U.S. Patent No. 3,872,363 to Gross ("the '363 patent"). The Examiner has objected to Claims 7, 32 and 34. These rejections are respectfully traversed.

37 CFR 1.52(a) and (b) Specification Requirements

Applicant has amended the specification per the Examiner's comments.

37 CFR 1.83(a) Drawing Objections

Applicant respectfully submits that replacement drawings in accordance with 37 CFR 1.121(d) have been submitted herewith.

35 U.S.C. §112, Second Paragraph Rejections

Applicant respectfully submits that the claims have been amended to address the Examiner's comments.

35 U.S.C. §§ 102(b) and 103(a) Rejections

Applicant respectfully submits that new claims 46 and 51 both require a first and a second diode, and a second triac electrically connected to each other across the armature and the field winding. None of the cited prior art discloses or teaches the novel configurations recited in Claims 46 and 51.

For example, Claim 46 recites a first diode and a second triac that, in the novel circuit configuration, may be used to bypass the field armature during a braking mode and further includes a second diode configured to control the voltage across the field winding. Claim 51 recites a first triac and a second diode that, in the novel circuit configuration, may be used to bypass the field armature during a braking mode and also includes a first diode configured across the first field winding to control the voltage. Neither of these configurations is disclosed or suggested in the '155 patent, which uses a series of switches to bypass the armature, does not suggest use of a second triac as

claimed, and fails to teach use of the second diode as claimed. In addition, the '155 patent fails to teach or disclose use of a first and a second controller for controlling the respective triacs. Applicant further respectfully submits that neither the '363 patent nor the '194 patent teach, disclose or suggest the novel circuit configuration as recited in Claims 46 and 51.

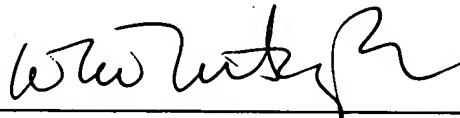
Claim 55 requires among other limitations, a second triac, electrically connected to a connection point between the commutating armature and the field winding, said second triac electrically connecting said field winding to said supply voltage for externally exciting said field winding by means of said supply voltage while bypassing said armature, and a diode, electrically connected across said field winding, said diode limiting the voltage across said field winding when in the braking mode. Applicant respectfully submits that none of the cited prior art teaches, discloses or suggests these limitations.

- For example, while the '155 patent may disclose use of a triac, nowhere does a second triac electrically connect a field winding to a supply voltage for externally exciting the field winding by means of the supply voltage while bypassing the armature, nor is there ever a second triac, electrically connected to a connection point between the commutating armature and the field winding. Applicant further respectfully submits that the '155 patent fails to teach a diode electrically connected across said field winding that limits the voltage across the field winding when in the braking mode. Applicant

further respectfully submits that neither the '363 patent nor the '194 patent teach, disclose or suggest these limitations.

It is respectfully submitted that claims 46 – 55, all of the claims remaining in the application, are in order for allowance and early notice to that effect is respectfully requested.

Respectfully submitted,



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